## Abstract of the Disclosure

A method and a system for separating the phases of a multiphase fluid from one or more wells. The system includes at least one first gravity separator and at least one second gravity separator, and elements for conducting the fluid from the well or wells to the first and second gravity separator(s). The system includes elements for selectively conducting the fluid to the first and second gravity separators either in parallel or in subsequent steps depending on the properties of the well fluid and process conditions.